

FIG. 1A

FIG. 1B

FIG. 1C

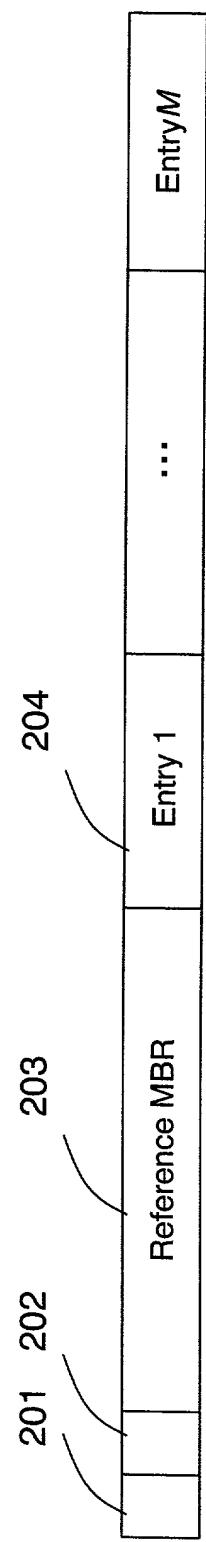


FIG. 2A

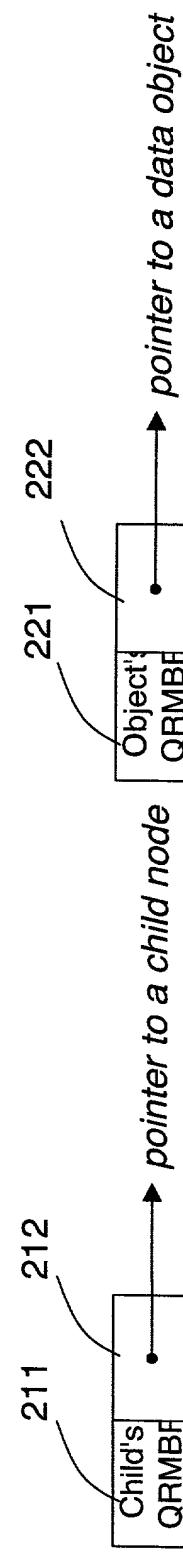


FIG. 2B

FIG. 2C

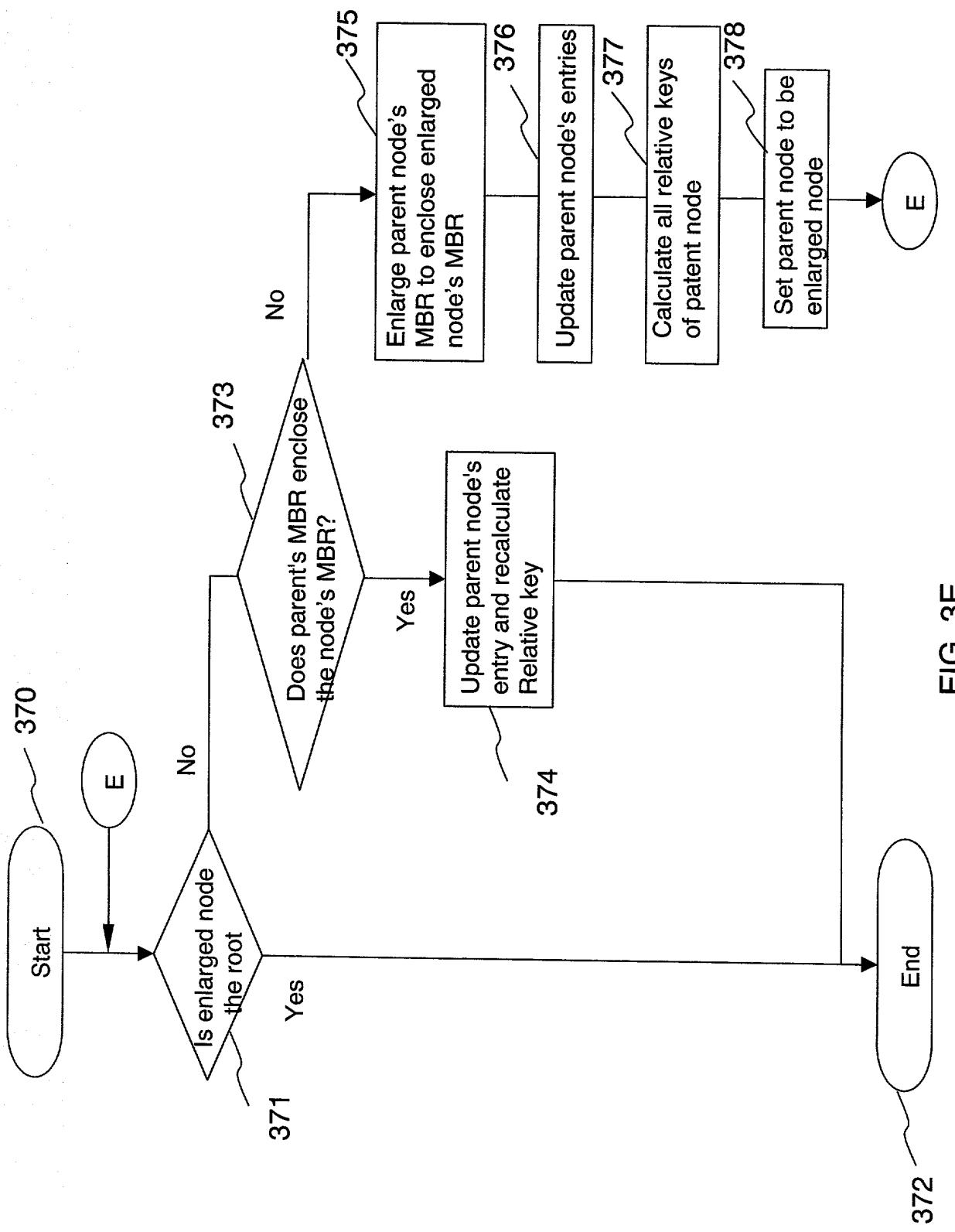


FIG. 3E

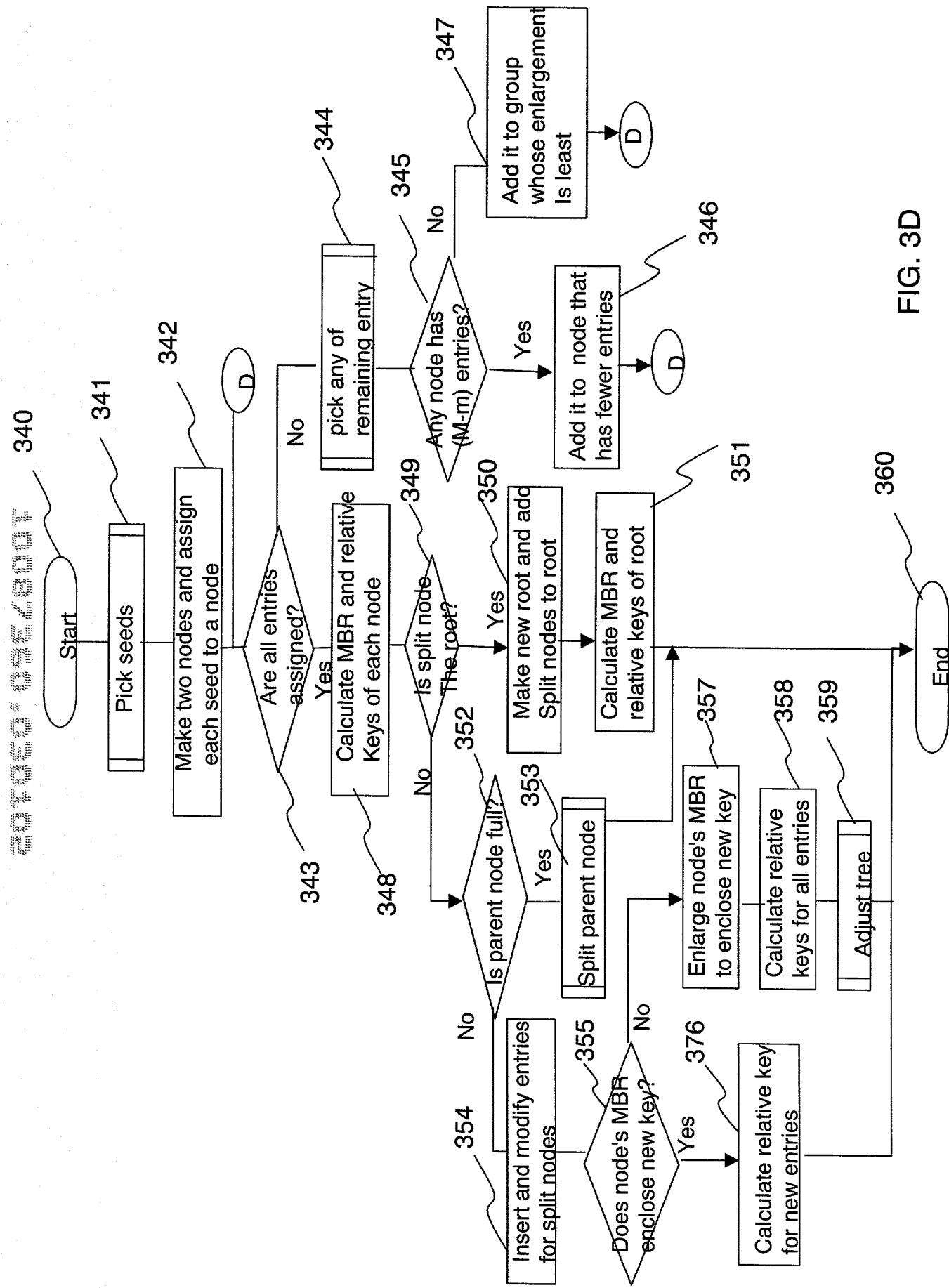


FIG. 3D

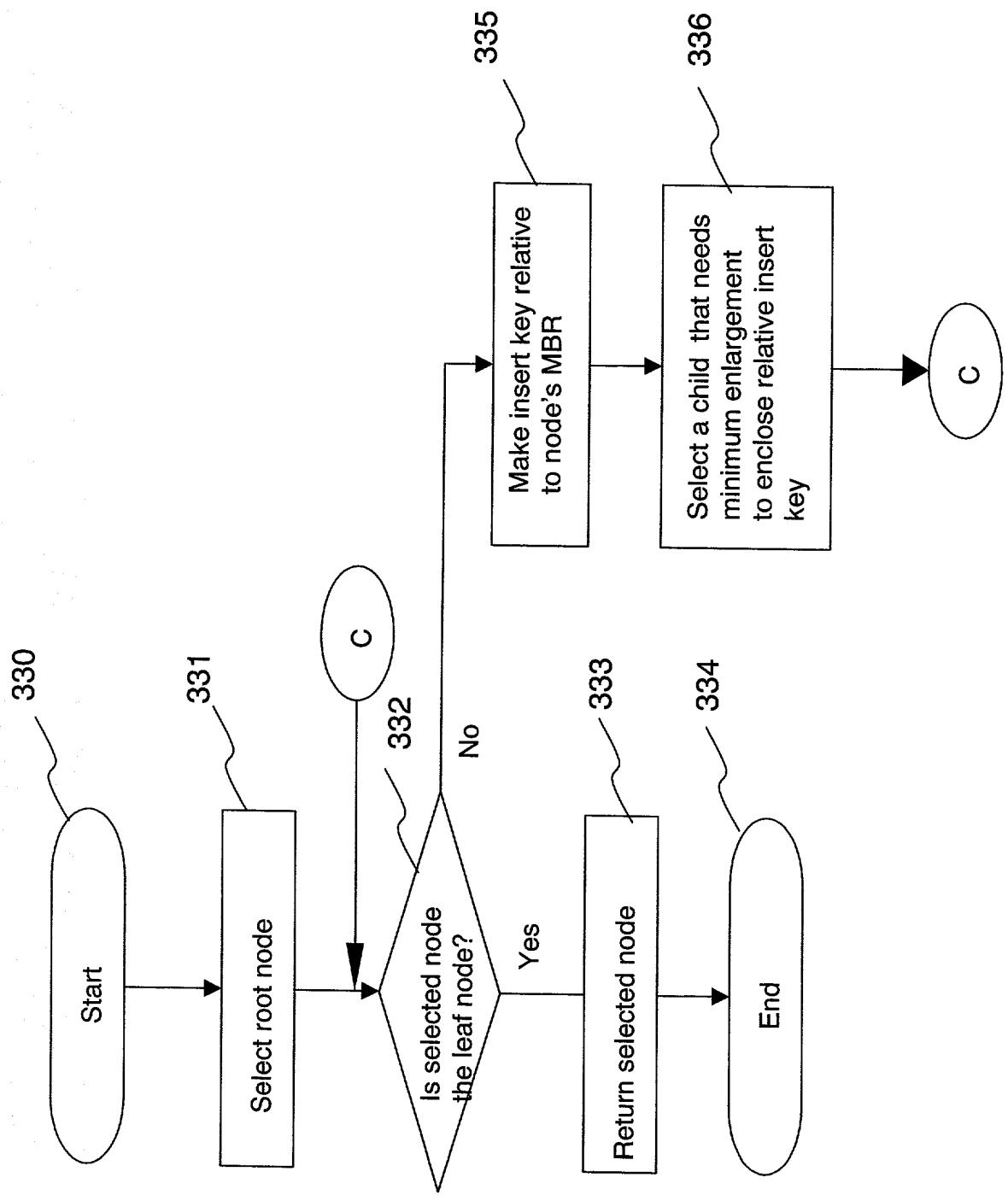


FIG. 3C

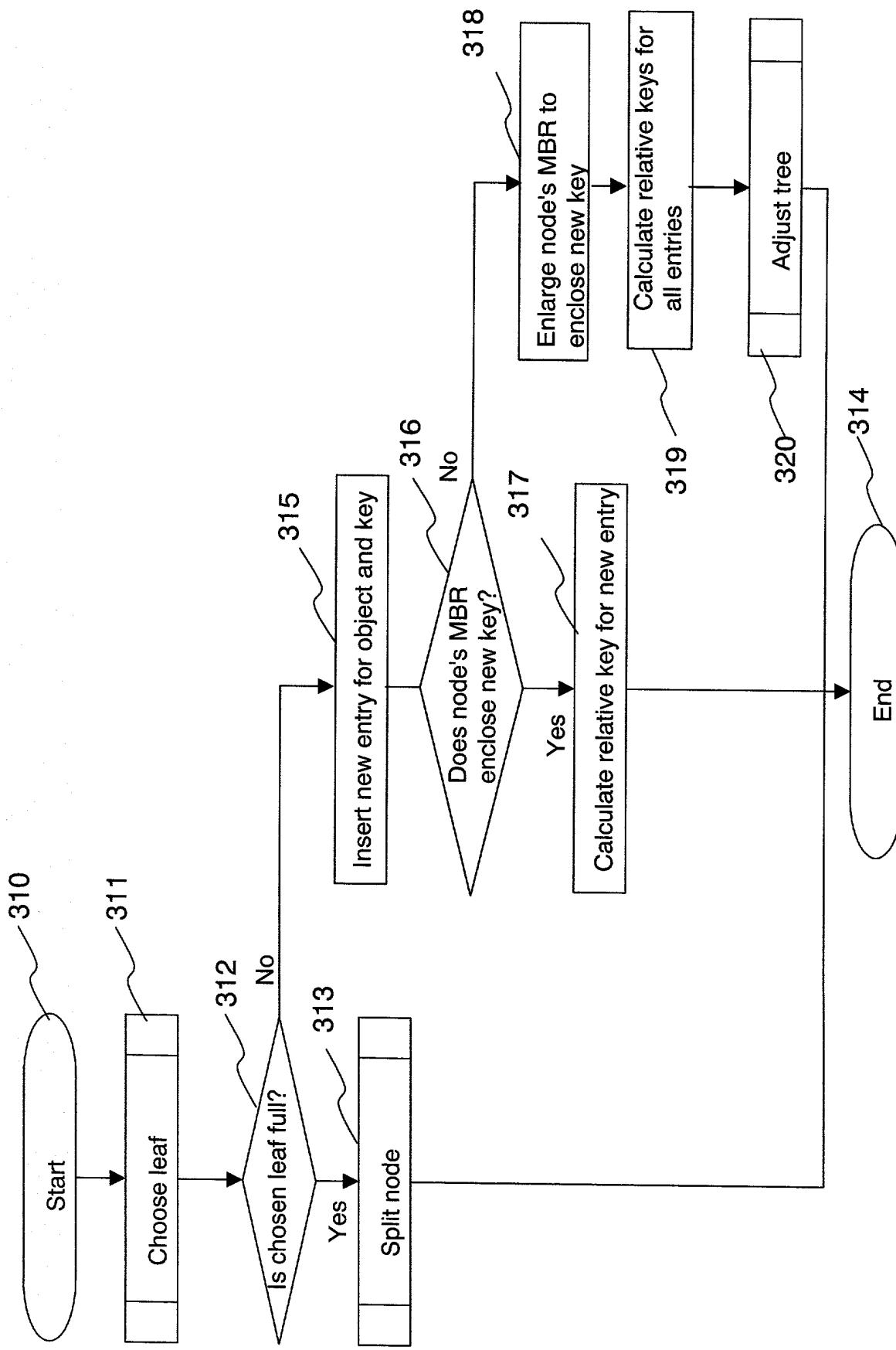


FIG. 3B

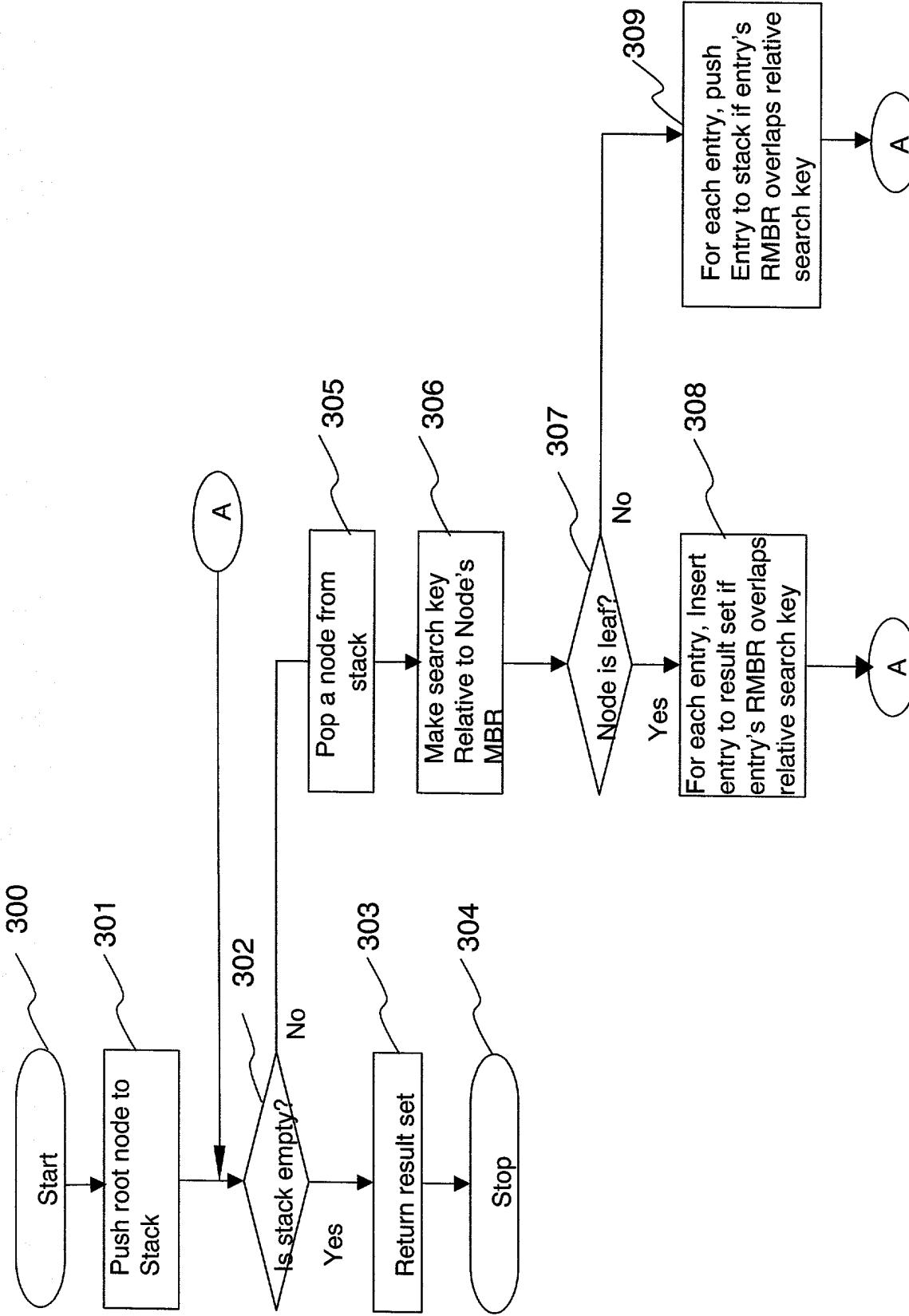


FIG. 3A

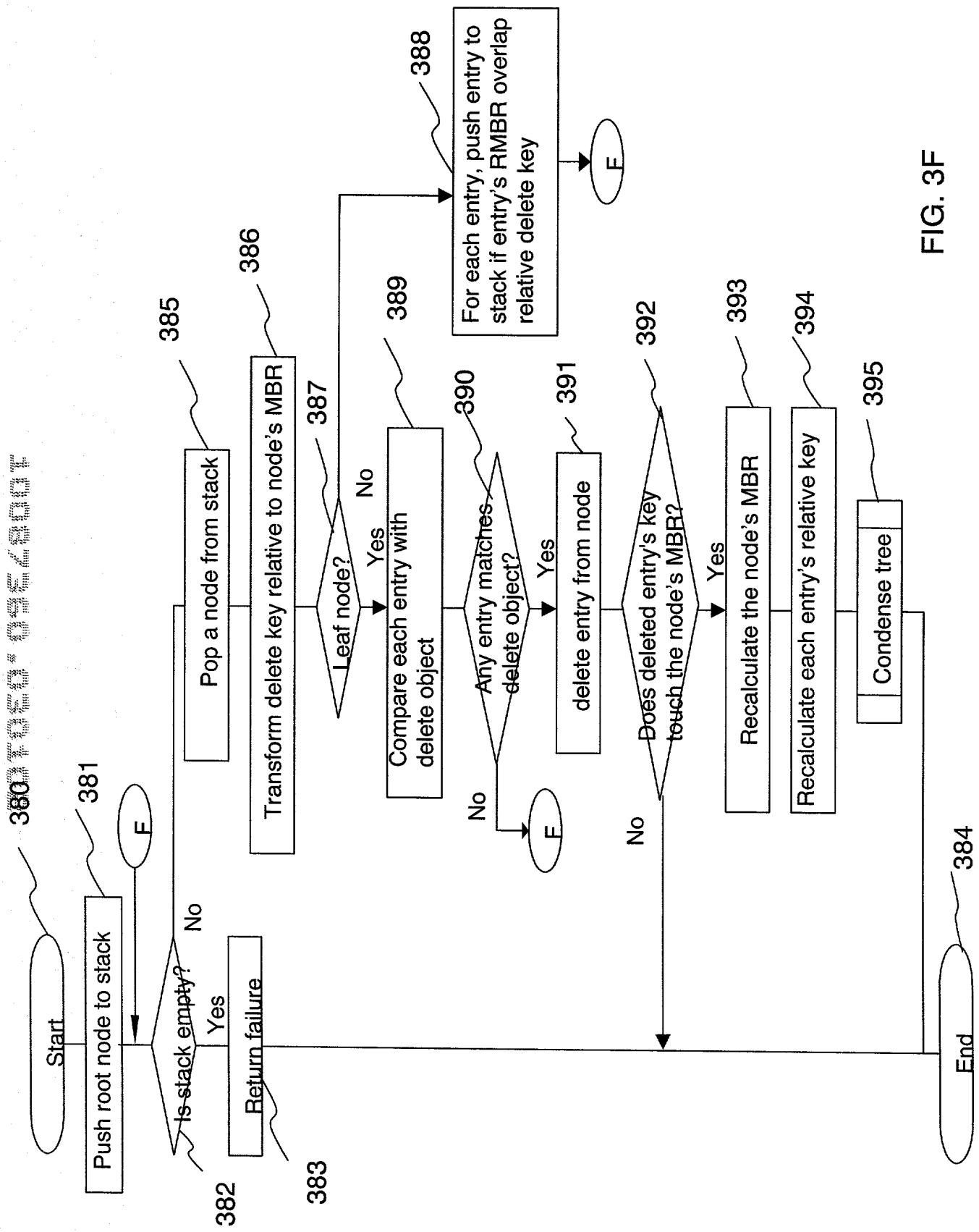


FIG. 3F

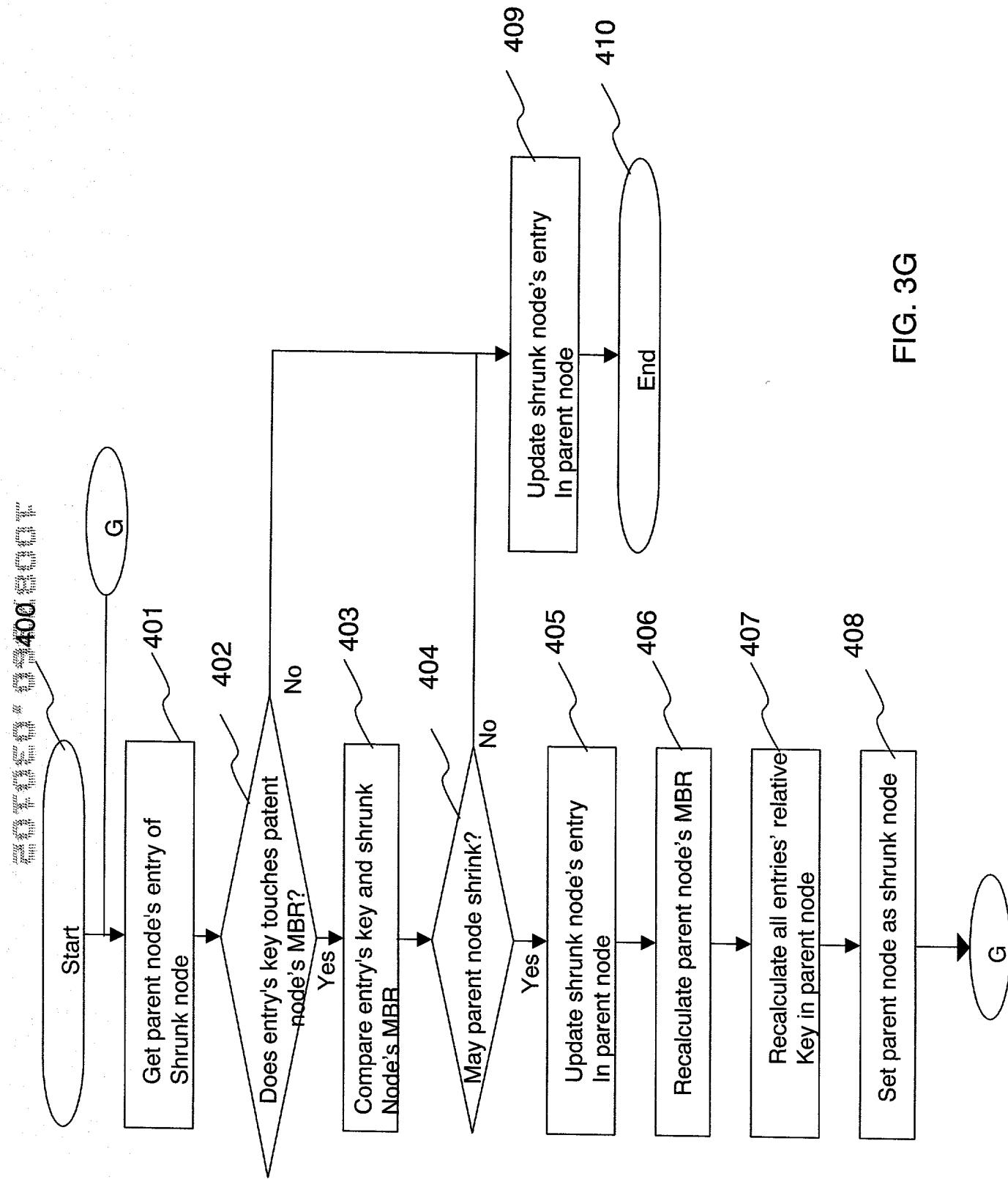


FIG. 3G

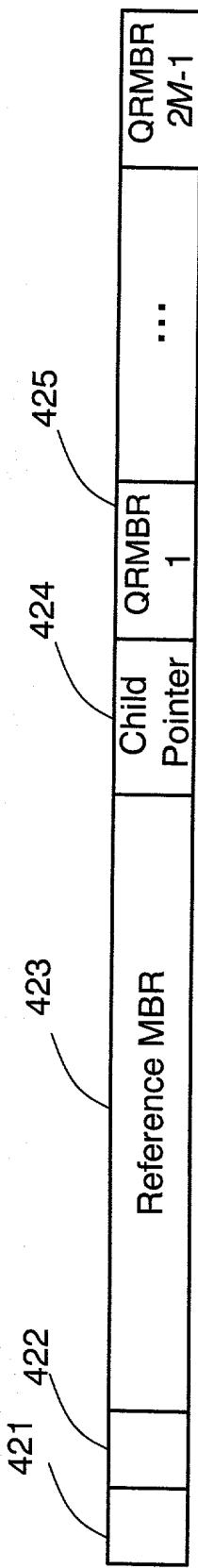


FIG. 4A

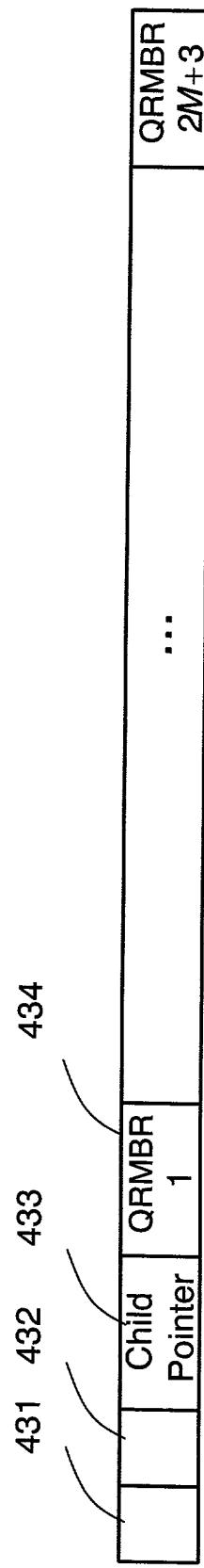


FIG. 4B

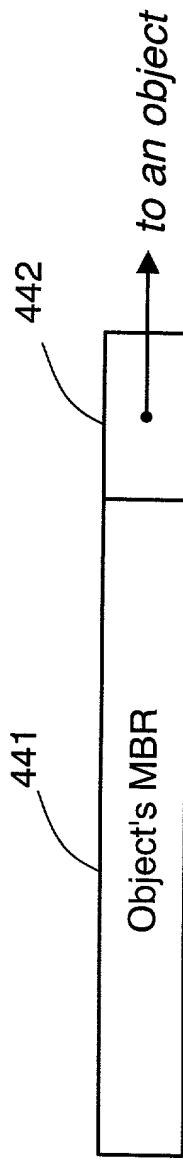


FIG. 4C

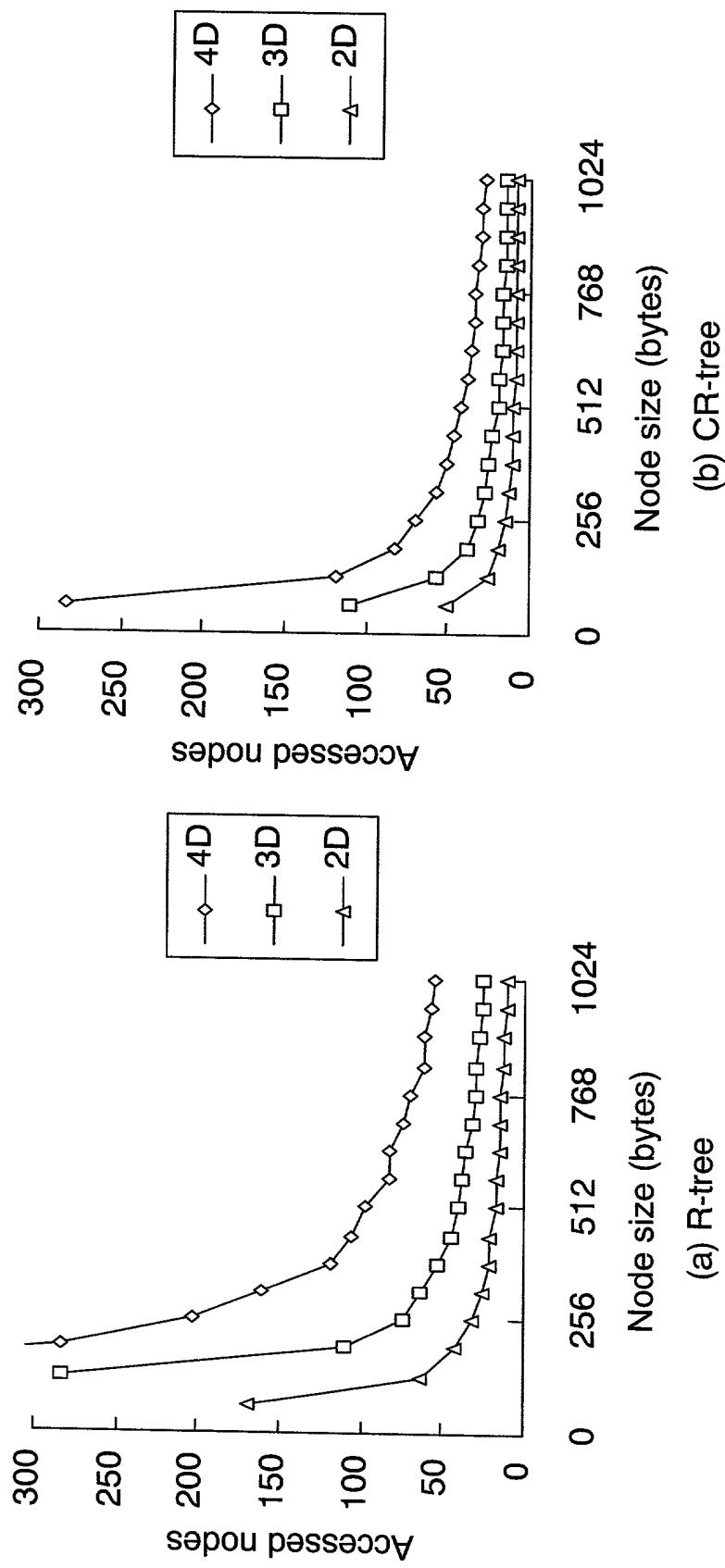


FIG. 5A

FIG. 5B

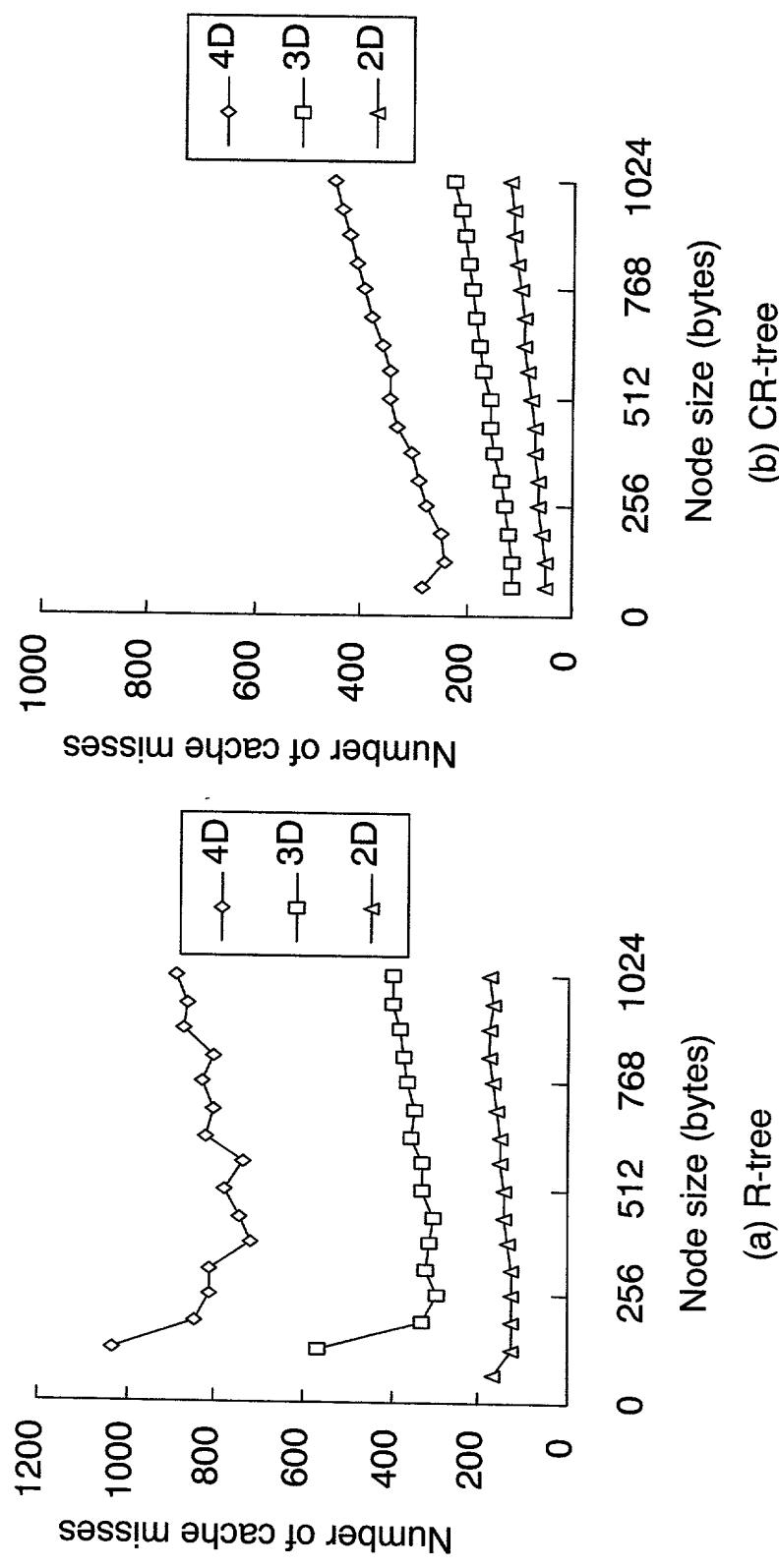


FIG. 6A

FIG. 6B

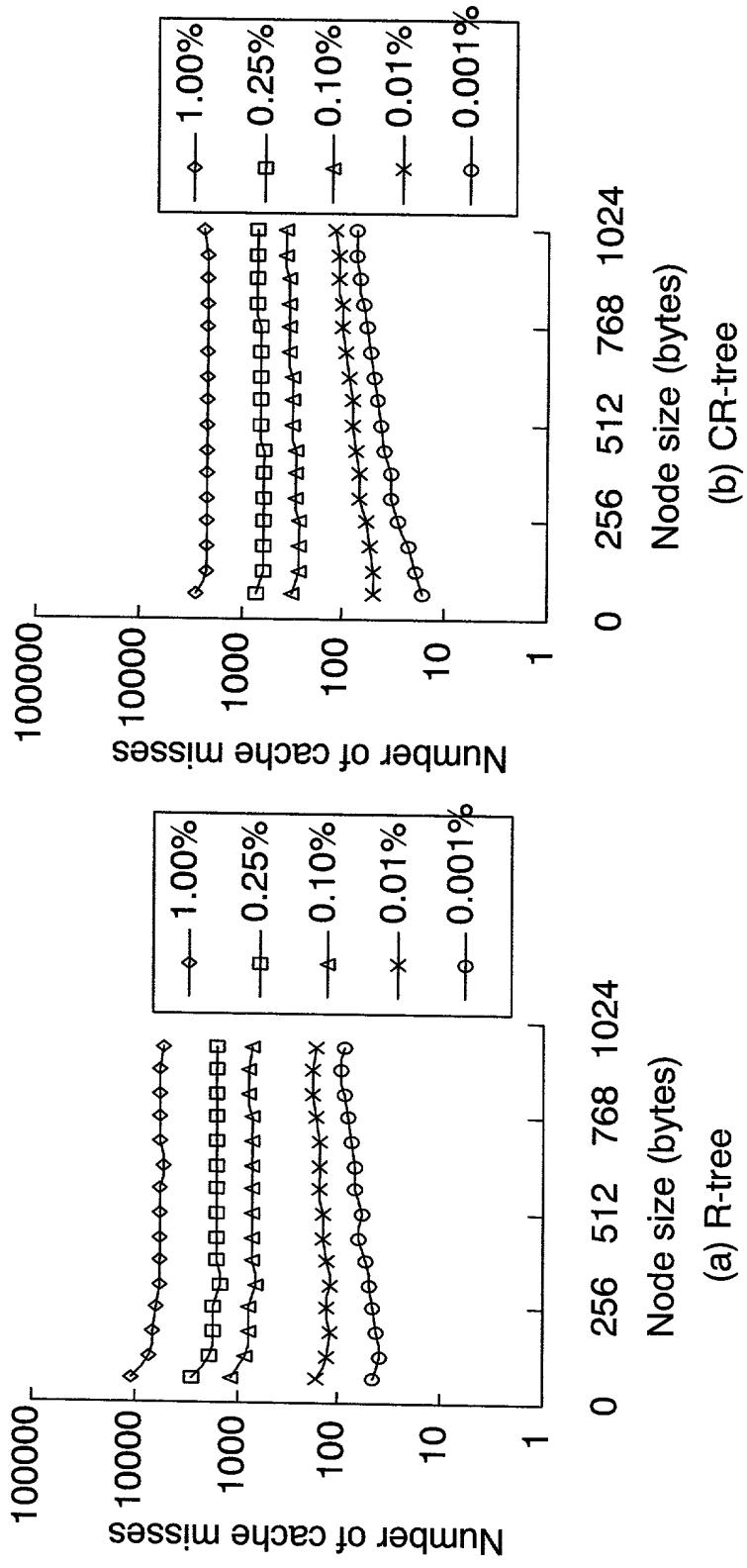


FIG. 7A

FIG. 7B

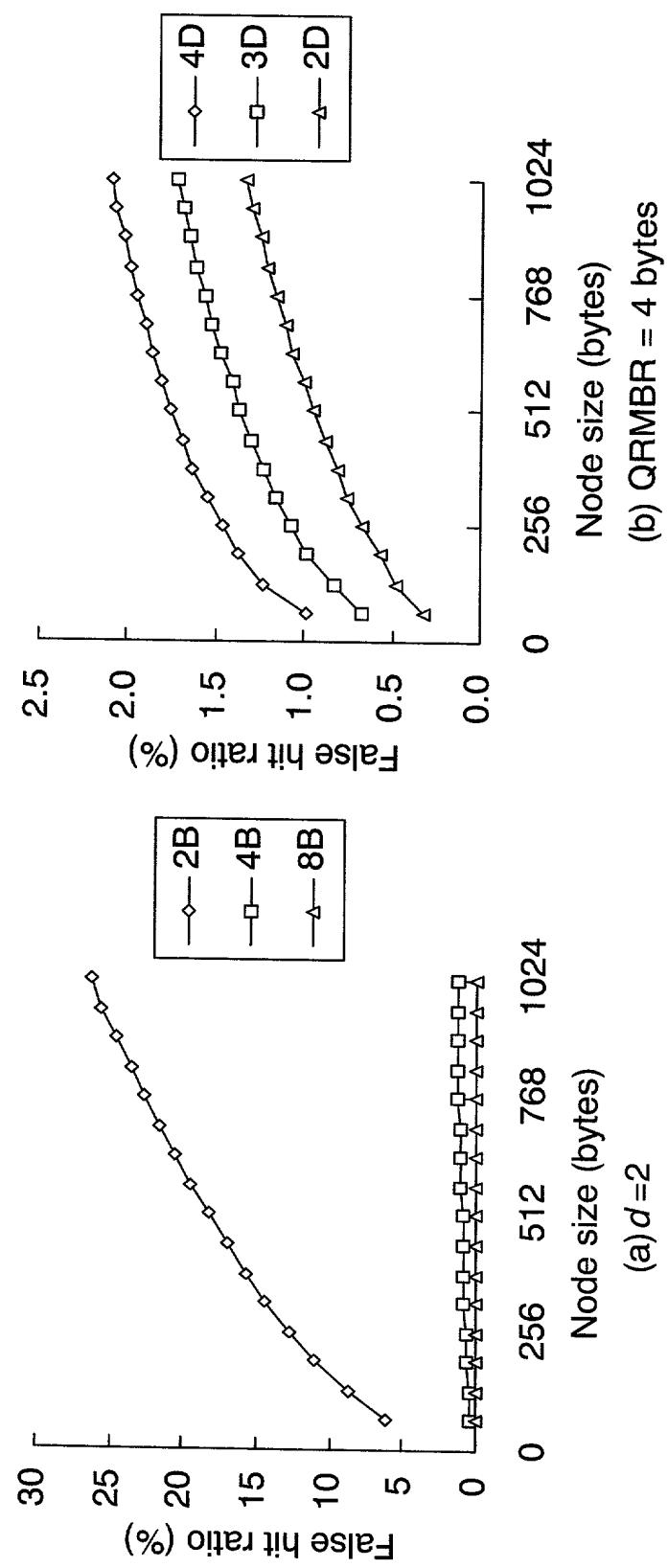


FIG. 8A

FIG. 8B

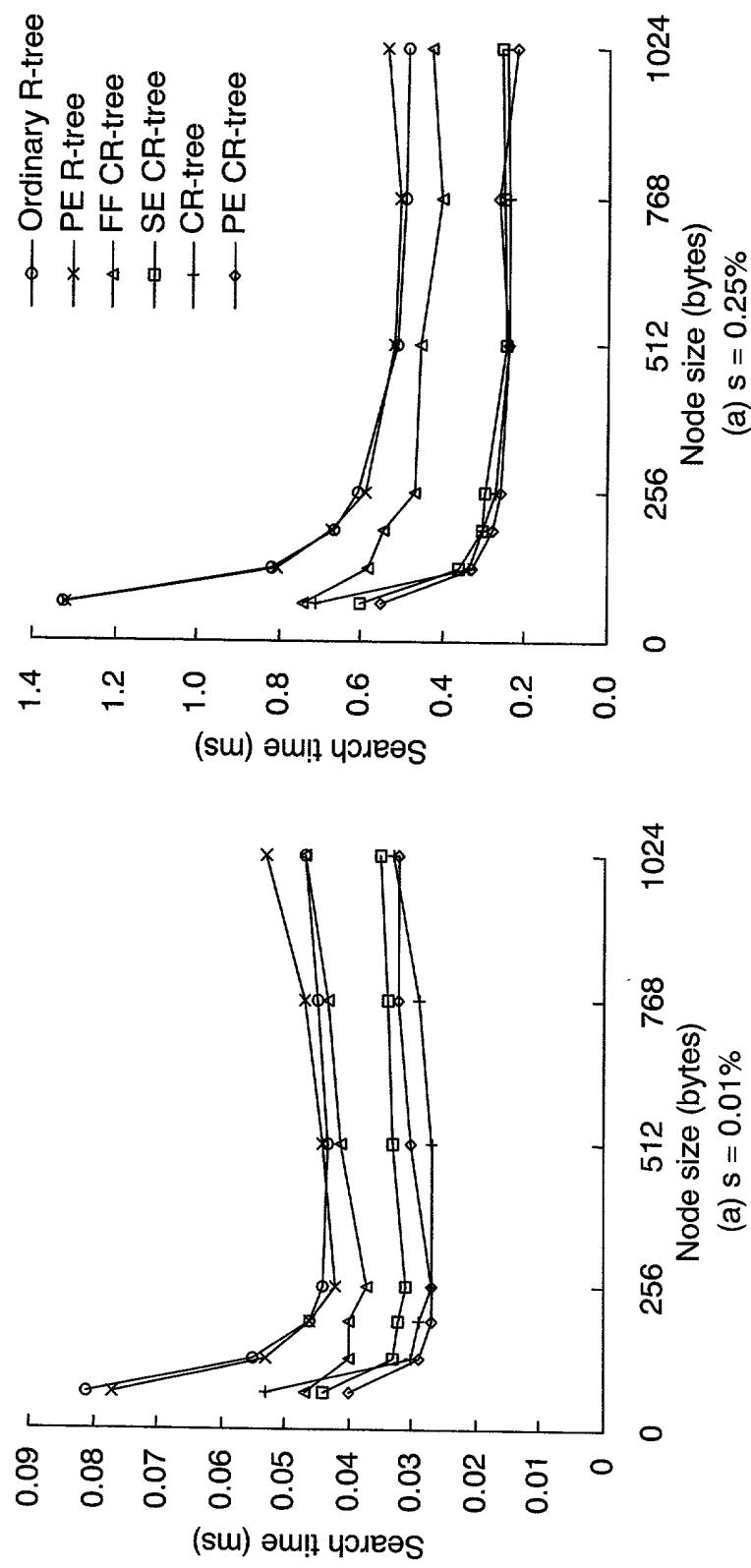
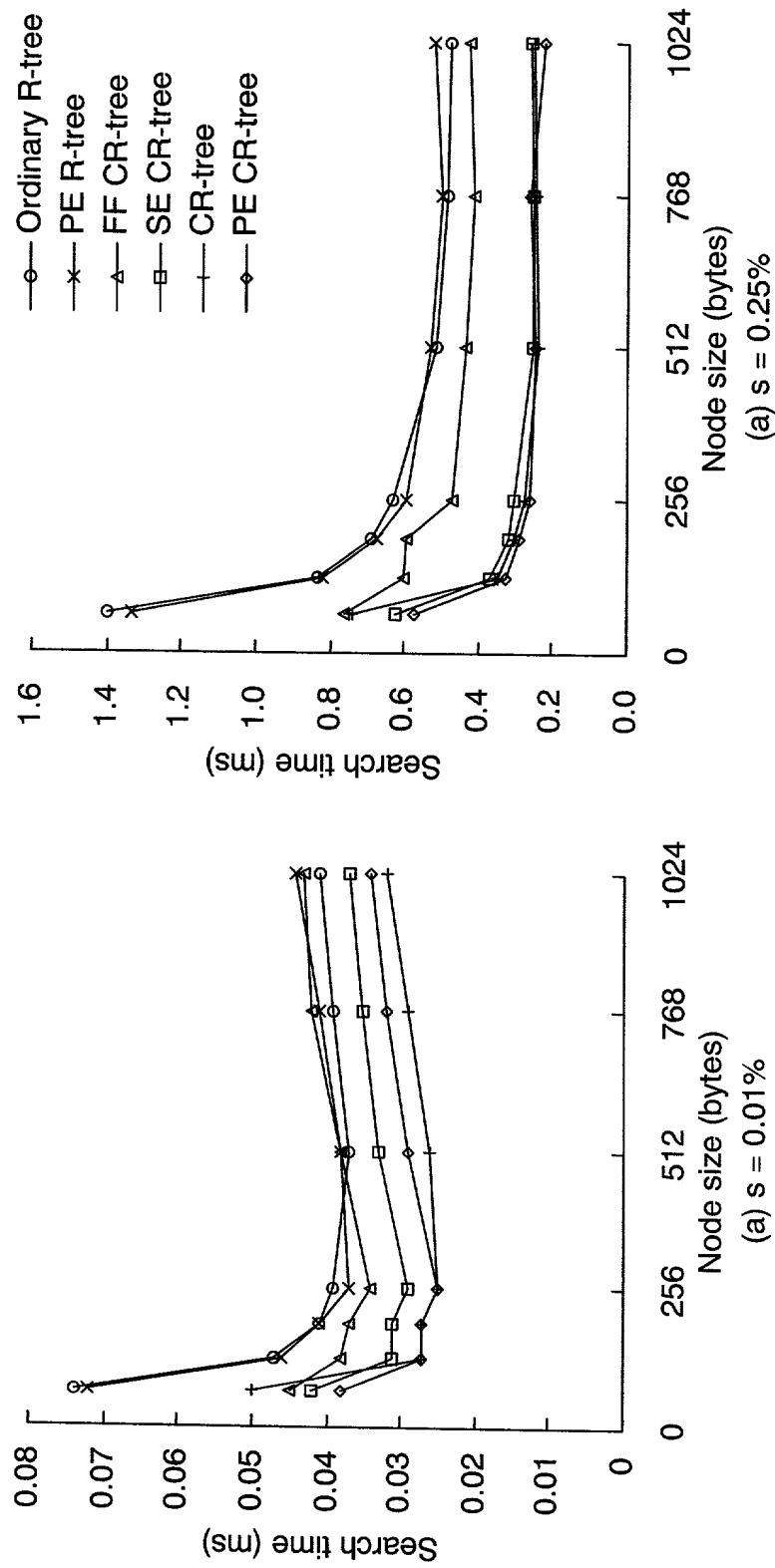


FIG. 9A

FIG. 9B



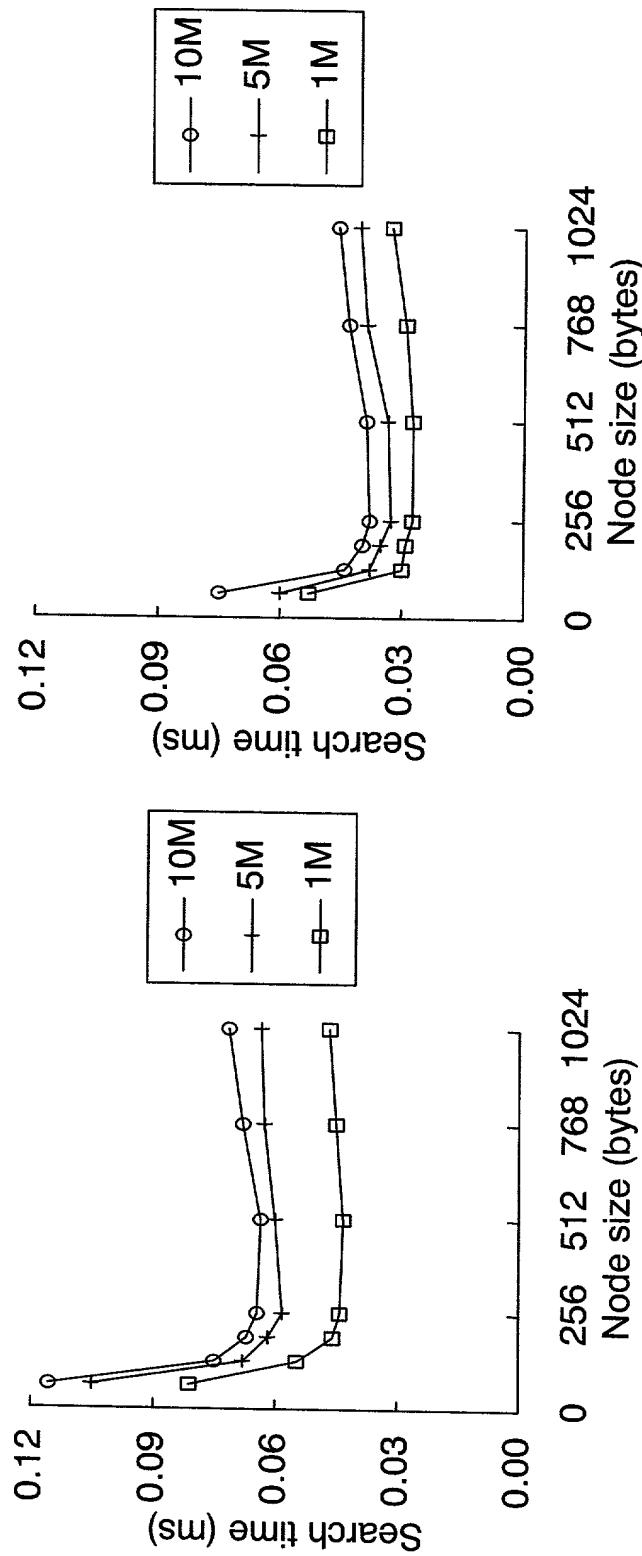
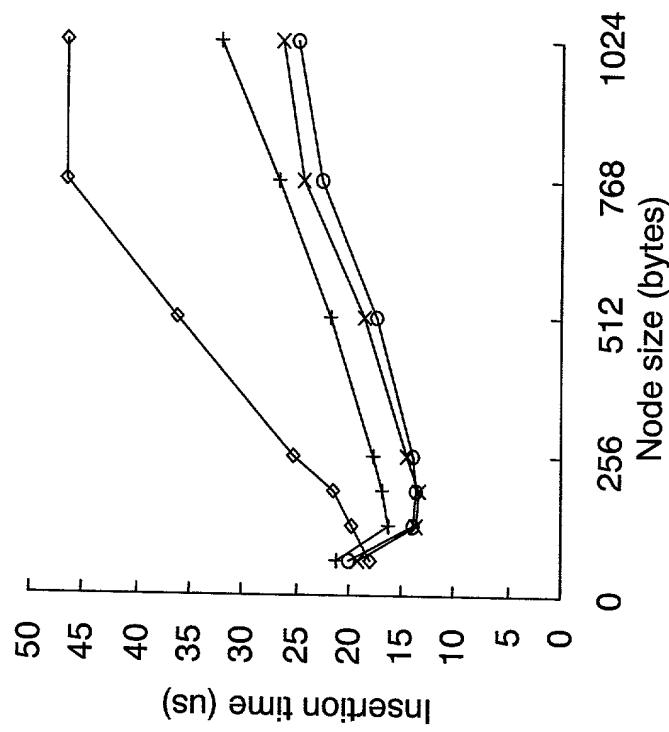
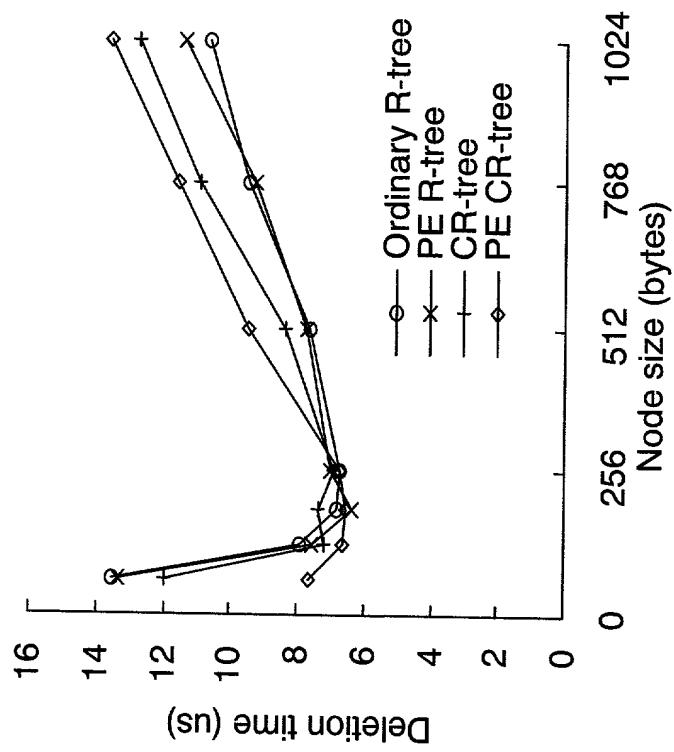


FIG. 11A

FIG. 11B



(a) Insertion Time



(b) Deletion Time

FIG. 12A

FIG. 12B

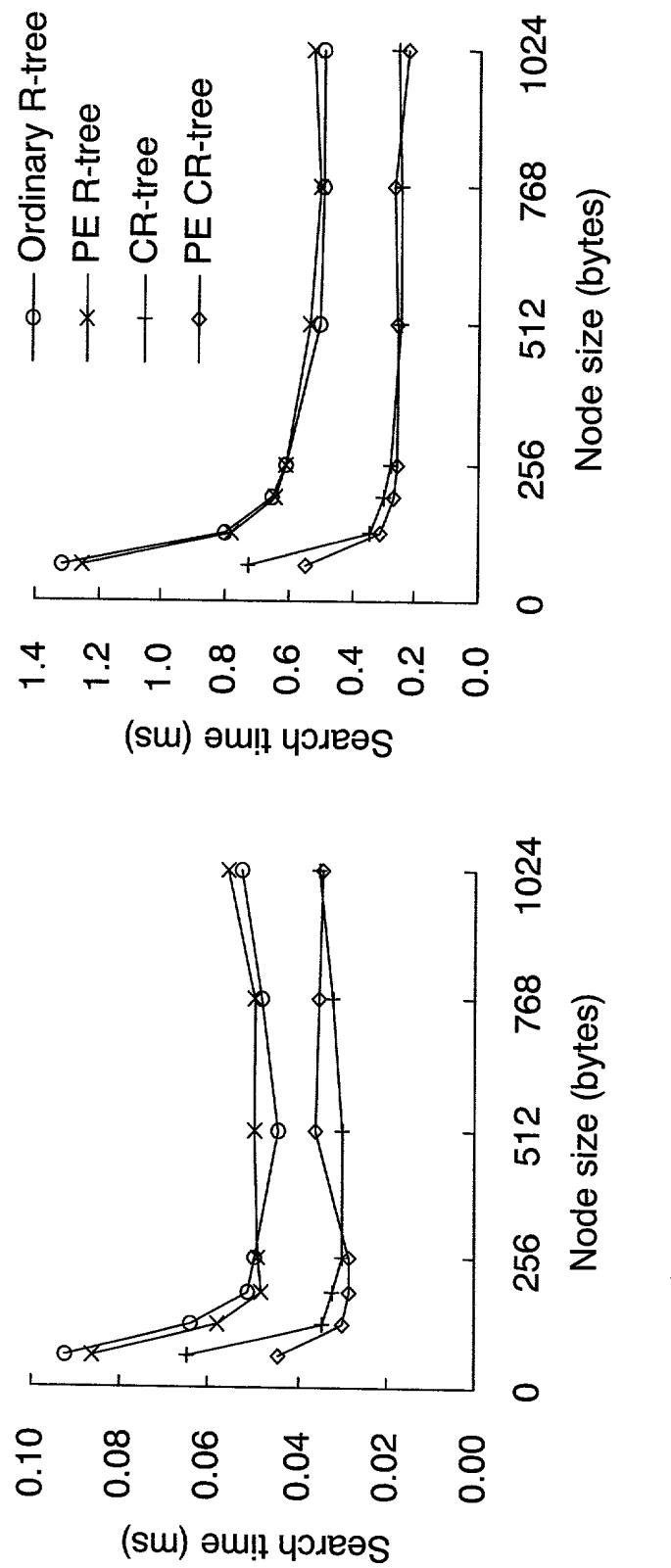


FIG. 13A

FIG. 13B

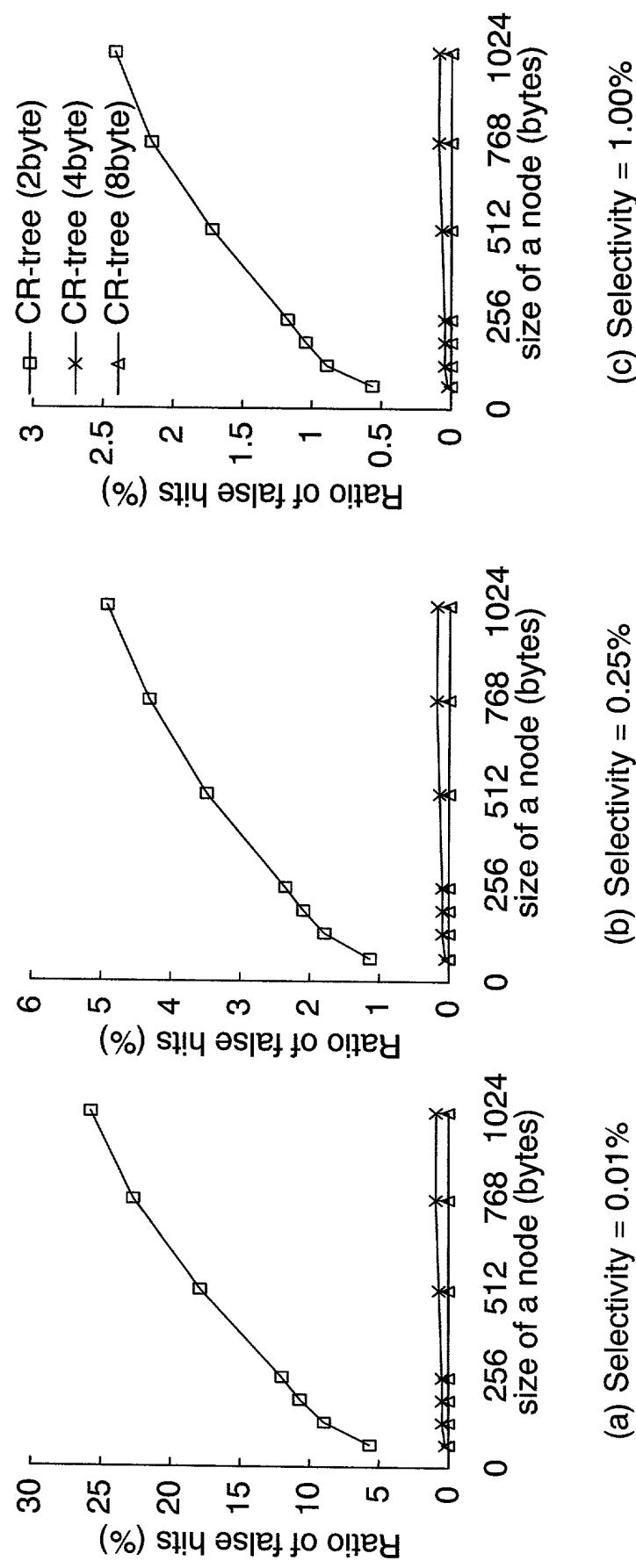
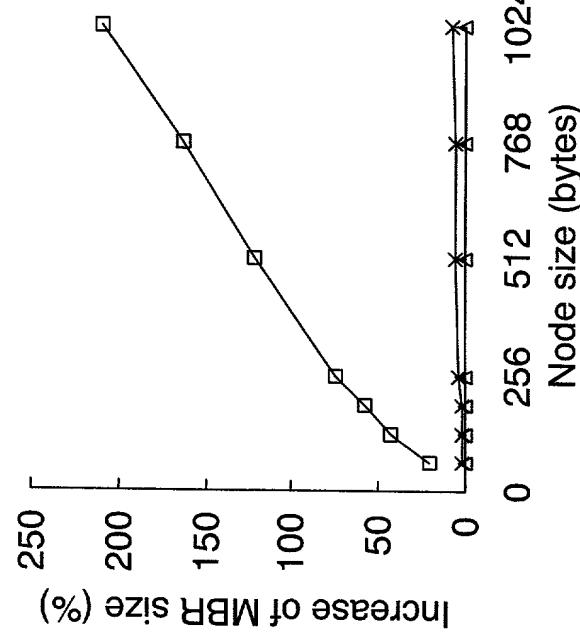


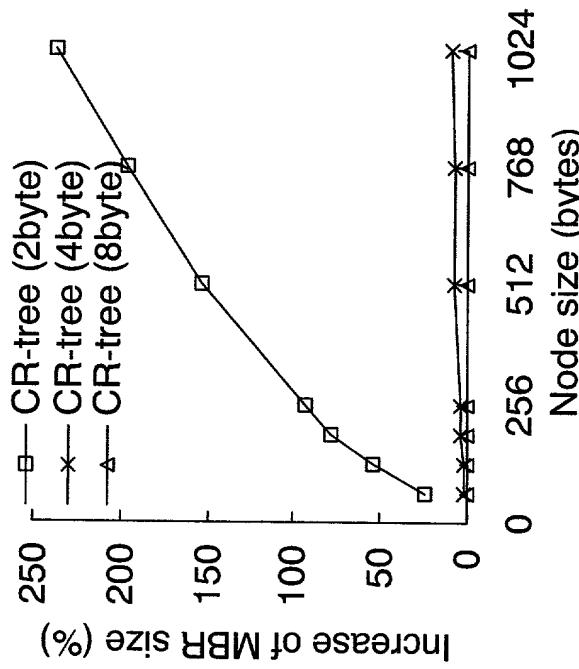
FIG. 14A

FIG. 14B

FIG. 14C



(a) Object MBRs



(b) Node MBRs

FIG. 15A

FIG. 15B

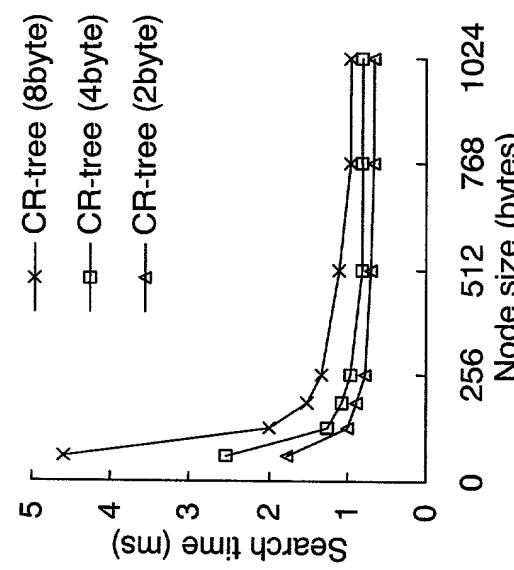
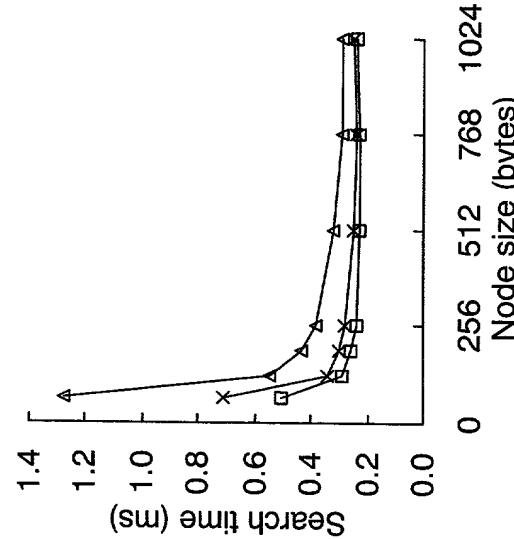
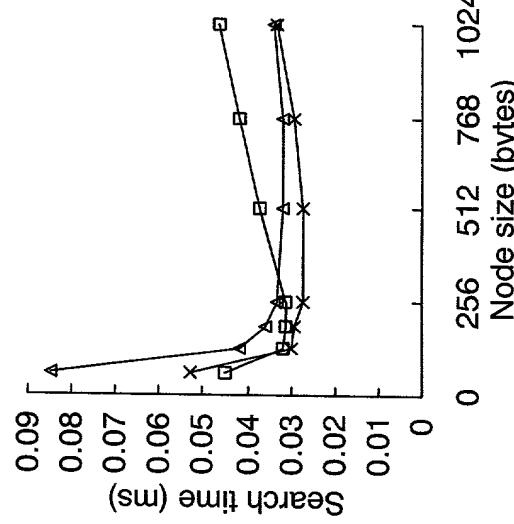
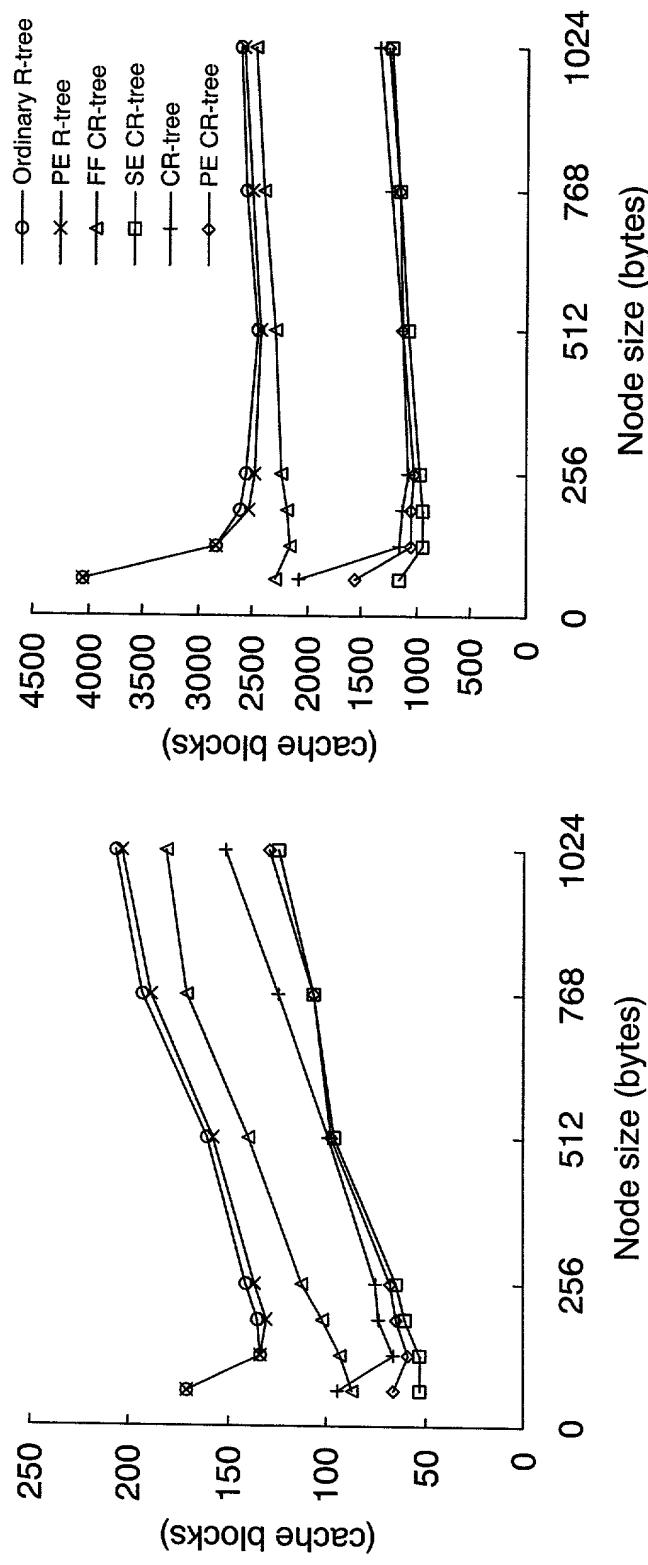


FIG. 16A

FIG. 16B

FIG. 16C

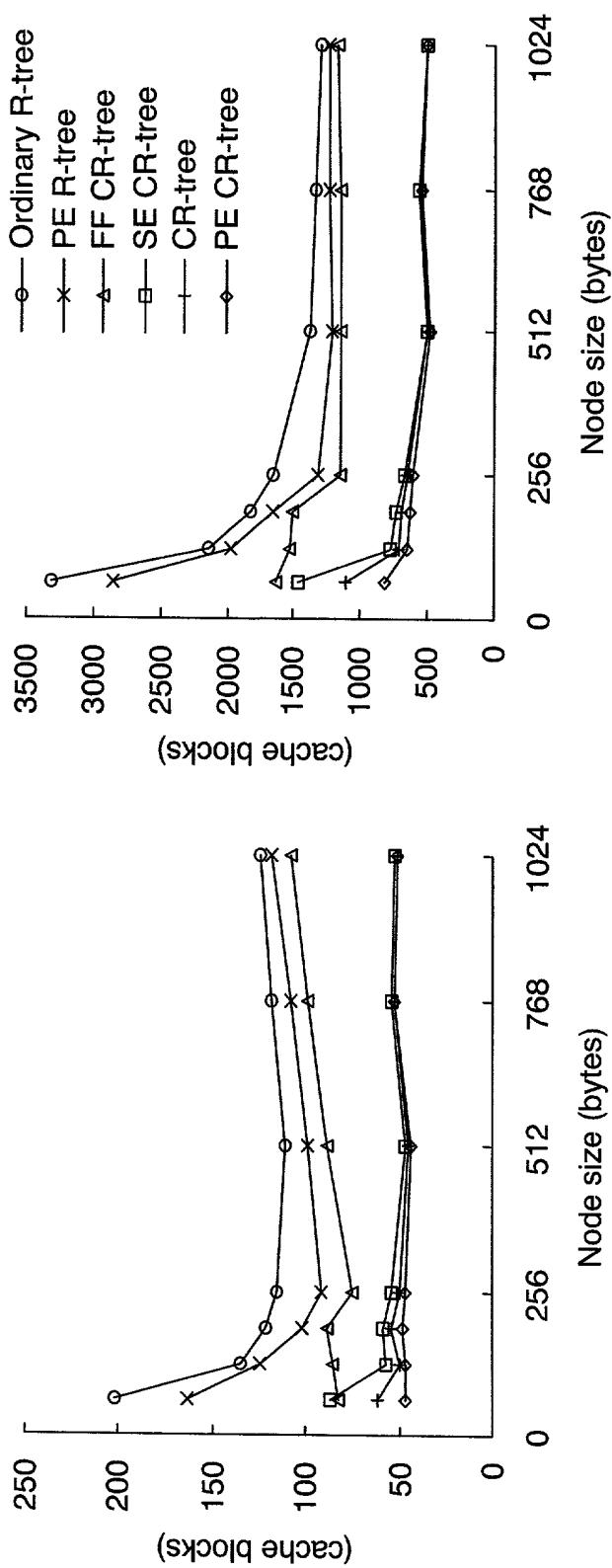


(a) Selectivity = 0.01%

(b) Selectivity = 0.25%

FIG. 17A

FIG. 17B

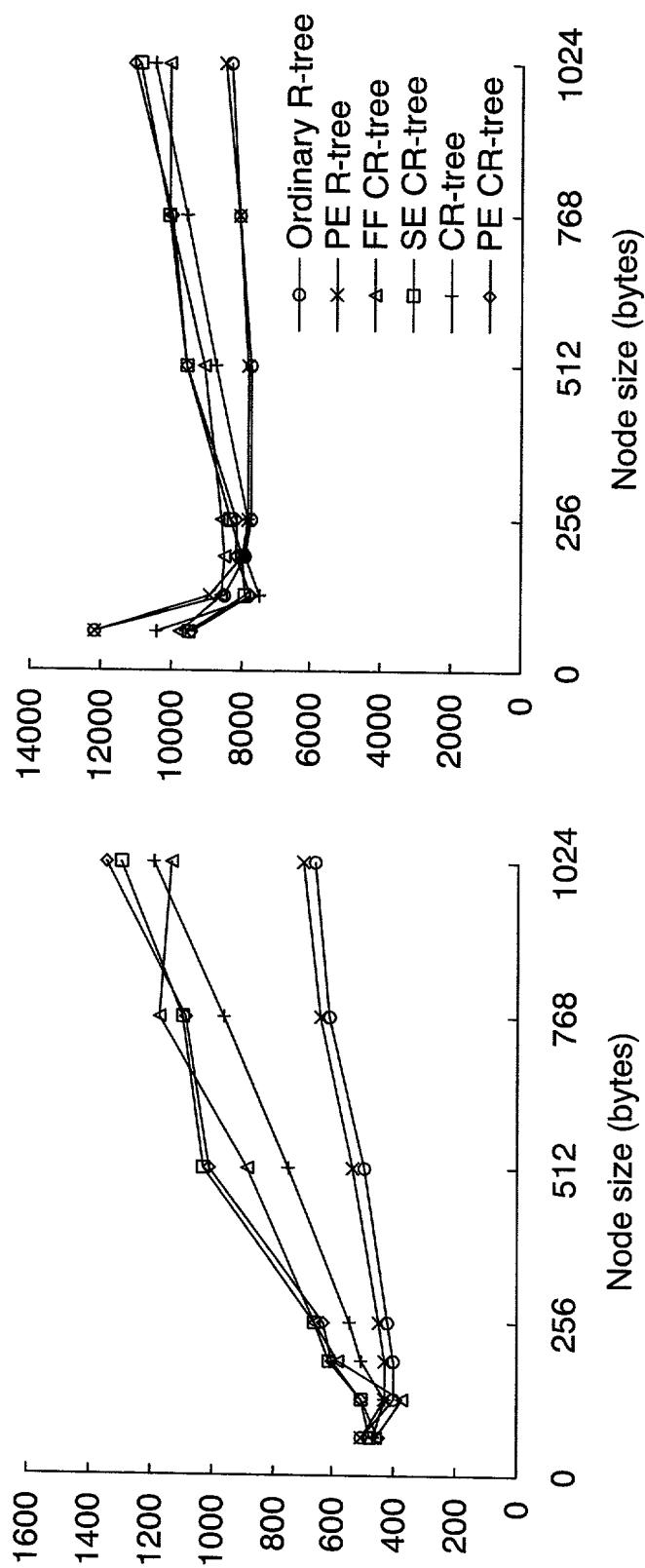


(a) Selectivity = 0.01%

(b) Selectivity = 0.25%

FIG. 18A

FIG. 18B

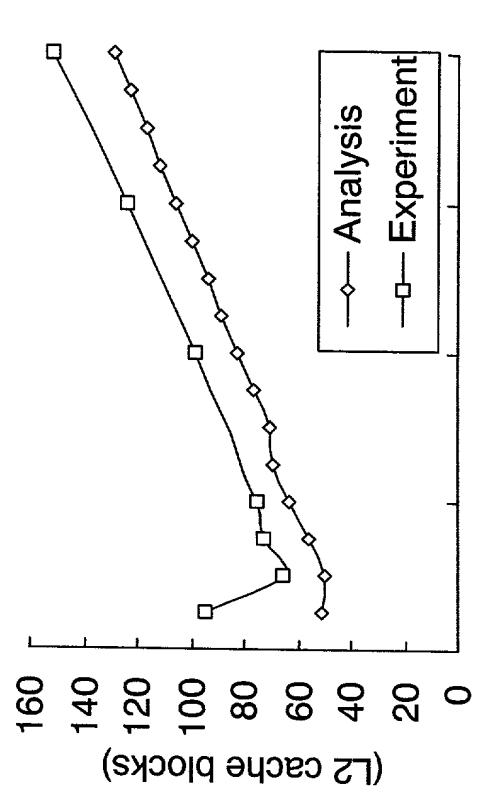


(a) Selectivity = 0.01%

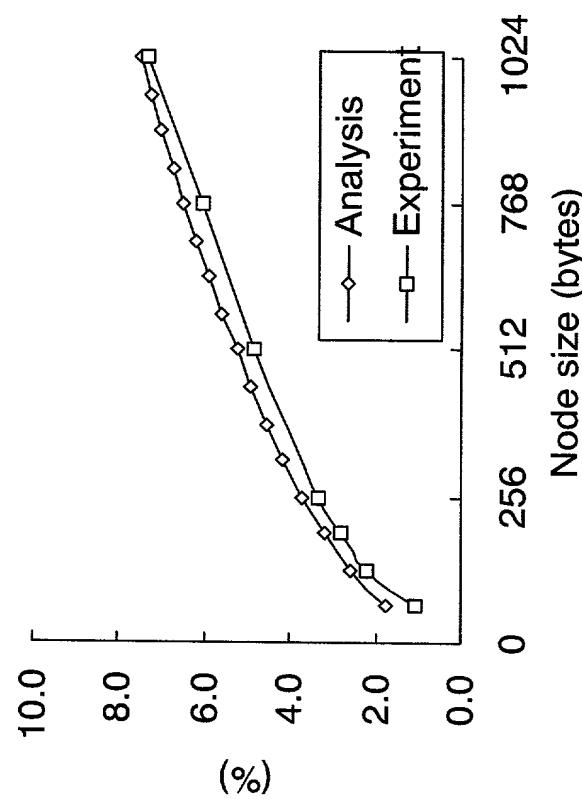
(b) Selectivity = 0.25%

FIG. 19A

FIG. 19B



(a) Amount of Accessed Index Data



(b) Increase of Object MBR Size

FIG. 20A

FIG. 20B